IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) An optical subscriber network system comprising:

a server bi-directional optical transmitter including:

a multiplexer for multiplexing communication data and broadcast data;

a server laser diode for converting the multiplexed data into an optical signal for downstream transmission to a subscriber;

a server photo diode for receiving and converting optical signals comprising communication data from a subscriber, wherein the server bi-directional optical transmitter transmits the upstream communication data;

a first PHY device for converting the communication data received from the server photo diode into a media independent interface (MII) signal; and

an Ethernet switch coupled to the first PHY device, the multiplexer and a second PHY device; and

a subscriber bi-directional optical receiver including:

a subscriber laser diode for transmitting upstream communication data,

a subscriber photo diode for receiving and converting the optical signal transmitted from the server bi-directional optical transmitter into an electrical signal, and

a demultiplexer for multiplexing and dividing the multiplexed signal into communication data and broadcast data;

wherein the optical transmitter and optical receiver are configured for transceiving image signals and Ethernet communication signals in two directions by a single laser diode and photo diode; and

wherein the multiplexer and demultiplexer comprise time division multiplexer (TDM) and demultiplexer (TDDM), respectively;

an Ethernet switch configured to (1) switch communication data transmitted from a demultiplexer to a subscriber computer, and (2) receive the communication data transmitted from the subscriber computer;

the first PHY device being coupled to the demultiplexer for converting the communication data with a media independent interface type (MII type) into a TX signal;

the second PHY device for converting the TX signal into a MII signal for the Ethernet switch, and to convert a MII signal from the Ethernet switch into a TX signal for to a subscriber laser diode; and

a third PHY device for converting the MII signal into a multi level transmit-3 (MLT-3) signal

wherein, the TX signal output from the second PHY device is used to operate the first PHY device.

2. (Canceled)

3. (Currently Amended) The optical subscriber network system as claimed in claim ~~2~~1, wherein the communication data is received from a server computer.

4. (Previously Presented) The optical subscriber network system as claimed in claim 1, wherein the server bi-directional optical transmitter transmits the upstream communication data to a server computer.

5. (Canceled)

6. (Canceled)

7. (Canceled).

8. (Previously Presented) ~~The optical subscriber network system as claimed in claim 5,~~ An optical subscriber network system comprising:

a server bi-directional optical transmitter including:

a multiplexer for multiplexing communication data and broadcast data:

a server laser diode for converting the multiplexed data into an optical signal for downstream transmission to a subscriber;

a server photo diode for receiving and converting optical signals comprising communication data from a subscriber, wherein the server bi-directional optical transmitter transmits the upstream communication data;

a first PHY device for converting the communication data received from the server photo diode into a media independent interface (MII) signal; and

an Ethernet switch coupled to the first PHY device, the multiplexer and a second PHY device; and

a subscriber bi-directional optical receiver including:

a subscriber laser diode for transmitting upstream communication data,

a subscriber photo diode for receiving and converting the optical signal transmitted from the server bi-directional optical transmitter into an electrical signal, and

a demultiplexer for multiplexing and dividing the multiplexed signal into communication data and broadcast data;

wherein the optical transmitter and optical receiver are configured for transceiving image signals and Ethernet communication signals in two directions by a single laser diode and photo diode;

wherein the multiplexer and demultiplexer comprise a time division multiplexer (TDM) and demultiplexer (TDDM), respectively; and the subscriber bi-directional optical receiver providing the communication data divided by the TDDM to a subscriber-side computer; and

wherein the subscriber bi-directional optical receiver further comprises:

an Ethernet switch to (1) switch the communication data from the demultiplexer to a subscriber-side computer, and (2) receive the communication data from the subscriber computer; and

a third PHY device coupled to the demultiplexer to convert the communication data with a MII type into a TX signal for the Ethernet switch, and convert a MII signal from the Ethernet switch into a TX signal for the subscriber laser diode,

wherein, the TX signal from the Ethernet switch is used to operate the third PHY device.

9. (Currently Amended) The optical subscriber network system as claimed in claim ~~5~~1, wherein the first PHY device converts a 100 Base-T optical fiber signal into a MII signal, and the second PHY device converts a media independent interface MII) signal into a multi level transmit-3 (MLT-3) signal.

10. (Currently Amended) The optical subscriber network system as claimed in

claim ~~5~~1, wherein the TDM inserts a plurality of broadcast data streams and communication data into time slots and generates time slot frames.

11. (Currently Amended) The optical subscriber network system as claimed in claim 1, wherein subscriber bi-directional optical receiver further comprising:

~~a~~the third PHY device ~~to converting~~converts ~~a~~the media independent interface (MII) signal input from an Ethernet switch into a Fast Ethernet (FX) signal and ~~output~~outputs the FX signal to the subscriber laser diode.

12. (Currently Amended) The optical subscriber network system as claimed in claim 11, wherein the FX signal is a non-return-to-zero-inversion (NRZI) signal.